

### **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application:

#### **Listing of claims:**

1. (currently amended) A method of segmenting an image of a structure stored as a set of spatially related data points representing variations in a predetermined parameter, said method comprising the steps of: selecting an initial location within the structure to be segmented[.]; assigning to each of the data points a value of connectivity indicative of the confidence that respective ones of the data points are part of the same structure as said initial location, said value of connectivity including a function of the distance of the respective point from said initial location, and being assigned by monitoring variations in said predetermined parameter along a path between said data points and utilizing a function employing variations in said parameter as an indicator of said value of connectivity; and establishing a threshold value for said value of connectivity and selecting data points meeting said threshold value.
2. (cancel)
3. (currently amended) A method according to claim [[2]] 1 wherein the length of said path is combined with said function employing variations of said parameter to obtain said value of connectivity.
4. (currently amended) A method according to claim [[2]] 1 wherein a weighting factor is applied to said length of said path to vary the effect of said distance and said value of connectivity.
5. (original) A method according to claim 4 wherein said weighting factor is variable.
6. (original) A method according to claim 1 wherein said threshold value is adjustable to vary the data points selected for display.
7. (currently amended) A method according to claim [[2]] 1 wherein said function

employing variations in said parameter is an indication of the maximum variation in said parameter.

8. (currently amended) A method according to claim 3 wherein a plurality of paths between said initial location and respective ones of said points are evaluated and a value indicative of a confidence level is attributed to each path and wherein a function employing the plurality of connectivity values is obtained from said plurality of paths ~~[[is]]~~ and assigned to said data point.

9. (currently amended) A method according to claim ~~[[7]]~~ 8 wherein said plurality of paths is limited by application of a volume size value.

10. (original) A method according to claim 3 wherein a value of said predetermined parameter is mapped to a table to assign one of a plurality of values thereto and said evaluation of variation of said parameter is evaluated on the basis of values obtained from said table.

11. (original) A method according to claim 3 wherein values of said predetermined parameter are compared to a predefined range of values and those outside said range modified.

12. (original) A method according to claim 11 wherein said values are modified by reducing said values to zero.

13. (original) A method according to claim 3 wherein an area of said image is selected and values of said predetermined parameter in said area are modified.

14. (currently amended) A method according to claim ~~[[12]]~~ 13 wherein said values are modified by reducing said values to zero.

15. (original) A method according to claim 3 wherein values of said predetermined characteristic are exceeding said threshold are changed to a common value.

16. (original) A method according to claim 3 wherein values of said predetermined parameter are compared to said initial location and those within predefined limits of that of said initial location are selected for further processing.

17. (original) A method according to claim 1 wherein the number of the selected data points is compared to an anticipated value.

18. (original) A method according to claim 17 wherein said threshold is adjusted to bring said number of selected data points into conformity with said anticipated value.

19. (original) A method according to claim 17 wherein said set of selected data points represents a volume of a structure.

20. (original) A method according to claim 1 wherein said initial location is selected from a set of data points other than those being segmented.

21. (original) A method according to claim 20 wherein said initial location is selected based upon characteristics in said data set indicative of a particular feature.

22. (original) A method according to claim 1 wherein said initial location is selected from examination of a set of data points to identify a characteristic indicative of a particular feature.

23. (currently amended) An imaging apparatus comprising: a data store having an image of a structure stored as a set of spatially related data points representing variations in a predetermined parameter[.]; a comparator to compare a value of said predetermined parameter at each of said data points with that of an initial location within said structure to be segmented to and distance of said point from said initial location and establish a value of connectivity indicative of the confidence that respective ones of said data points are part of the same structure, said value of connectivity including a function of the distance of the respective point from said initial location and being established by monitoring variations in said predetermined parameter along a path between said data points and utilizing a function employing variations in said parameter as an indicator of said value of connectivity; and a selector to select respective points that meet an established threshold.

24. (original) An apparatus according to claim 23 including a path selector to select a plurality of paths between said initial location and each of said respective points, said comparator selecting a maximum value of connectivity.

25. (currently amended) A method of selecting an initial location for segmenting an image of a structure stored as a set of spatially related data points representing variations in a predetermined parameter, said method comprising the steps of examining a data set pertaining to said structure to identify one or more characteristics of said structure; and selecting said initial location according an identification of said one or more characteristics ~~from an examination of a data set of said structure to identify particular characteristics of said structure.~~

26. (currently amended) A method according to claim 25 wherein said data set is said set of spatially related data points.

27. (original) A method according to claim 25 wherein said data set is obtained from a set of data points other than those being segmented.

28. (currently amended) A method of establishing a threshold value for segmenting an image of a structure stored as a set of spatially related data points representing variations in a predetermined parameter, said method comprising the steps of: establishing a first number of data points expected to represent a segmented feature of said image[.]; establishing [[a]] said threshold value of a characteristic of said data set[.]; determining a second number of data points meeting said threshold; [[and]] comparing said first and second number of data points; and adjusting said threshold if said first and second numbers do not correlate.

29. (currently amended) A method according to claim 28 wherein including the step of adjusting said threshold is adjusted until to correlate said first and second numbers substantially correspond to each other.

30. (new) A computer readable medium comprising computer executable instructions that when executed cause a computing device to perform the method according to claim 1.

31. (new) A computer readable medium comprising computer executable instructions that when executed cause a computing device to perform the method according to claim 25.

32. (new) A computer readable medium comprising computer executable instructions that

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when executed cause a computing device to perform the method according to claim 28.